



SEYCHELLES

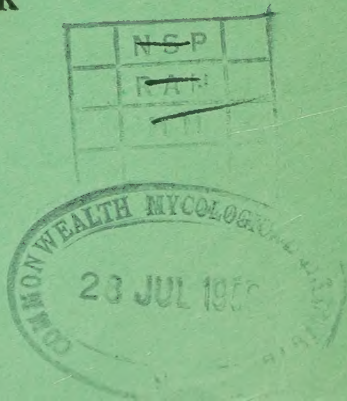
ANNUAL REPORT

OF THE

AGRICULTURAL DEPARTMENT

FOR THE YEAR

1958





SEYCHELLES

ANNUAL REPORT

OF THE

AGRICULTURAL DEPARTMENT

FOR THE YEAR

1958

TABLE OF CONTENTS

	<i>Page</i>
Introduction	1
Policy of the Department	1
Progress Achieved in 1958	1 — 2
Weather	2

SECTION I.—AGRICULTURE, FISHERIES AND FORESTRY IN THE COLONY

<i>A. Crop Husbandry</i>	
1. Coconuts	3
2. Cinnamon	3 — 4
3. Patchouli	4
4. Vanilla	4 — 5
5. Other Crops	5
<i>B. Animal Husbandry</i>	
Livestock	5
<i>C. Fisheries and Sundry Marine Produce</i>	
1. Fish	5
2. Green Turtles	6
3. Beche de Mer	6
4. Sea Shells	6
5. Hawksbill Turtles	6
<i>D. Minerals</i>	
<i>E. Zoological Specimens and Sea Birds and their Eggs</i>	
1. Giant Tortoises	6
2. Sea Birds and their Eggs	6 — 7
<i>F. Forestry</i>	
<i>G. Pests, Diseases and Vermin</i>	

SECTION II.—THE WORK OF THE DEPARTMENT

1. Crown Lands and Land Settlement	7 — 10
2. Forestry	10 — 13
3. Veterinary Work and Livestock	13 — 14
4. Produce Inspection and Laboratory Work	14 — 15
5. Inspection of Plantations	15
6. Investigations, Trials, Extension Work and Services in the Interest of Producers	15 — 21

SECTION III.—LEGISLATION

SECTION IV.—STAFF AND GENERAL

1. Staff	21 — 22
2. General	22

Annual Report of the Department of Agriculture for 1958.

—(o)—

Introduction

Copra prices were highly remunerative during the year but yields from many estates continued at a low level; a heavy drop in yield was especially noticeable towards the end of the year. The market for cinnamon leaf oil worsened but cinnamon bark prices reached unprecedented high levels. Good vanilla crops and prices resulted in new plantings of the orchid being made.

Policy of the Department

As stated in the 1957 Annual Report, the formal unvarying policy of the Department may be summed up as the practise and encouragement of optimum long-term use of the land and its products, and of other natural resources, in the best interests of the population. In detail, this involves more than can be set out here but the following are major aspects :

1. The encouragement and betterment of coconut cultivation on all, or most, land to which the crop is suited.
2. The encouragement and betterment of subsidiary export crop cultivation.
3. The encouragement and betterment of food-crop cultivation on all, or most, holdings in order that cultivators may be saved from the worst effects of a slump in the value of export crops, and to reduce food importation.
4. The encouragement and betterment of local processing.
5. The encouragement and betterment of fisheries.
6. The establishment of forest reserves, their re-afforestation and the obtaining of a sustained yield from them.
7. The up-grading of livestock and the encouragement of cattle, pigs, and poultry keeping for increased fertility and profit.
8. Encouragement and active assistance in the rehabilitation of eroded land and other unproductive areas.

Progressed achieved in 1958

The most note-worthy achievements were the visit, under a Colonial Development and Welfare grant, of a Visiting Coconut Expert, whose report will serve as a working basis for re-habilitating the all-important coconut industry and, as a sequence, the approval of Colonial Development

and Welfare Schemes for the appointment of an entomologist and of an agronomist. In the field, the launching of a Land Settlement Scheme, and the progress of the Re-afforestation Scheme, also with Colonial Development and Welfare funds, are especially worthy of mention. The Department's production of good quality cinnamon quills and quillings, which attracted attention on the English market, is also worthy of mention.

Weather

Rainfall was irregular and total rainfall was slightly under average in 1958. The month of February and June were unusually wet while the months of September and October were on the other hand unusually dry, the latter having been the driest of the months of October of the last 20 years. The following table was kindly supplied by the local office of the East African Meteorological Department.

Rainfall and Air Temperature — Victoria

1958 Month	Rainfall (inches)	Air Temperature (Fahrenheit)				Average Rainfall for 55 yrs.
		Mean Max.	Mean Min.	Highest Max.	Lowest Min.	
January	7.25	86.0	77.4	88.5	73.8	14.50
February	23.93	85.5	77.7	89.5	72.1	10.40
March	4.09	86.3	79.2	90.2	76.9	8.61
April	5.13	88.6	79.4	91.2	76.3	7.43
May	10.42	86.7	78.5	90.4	74.3	6.85
June	10.64	83.1	76.3	87.0	72.9	3.83
July	4.53	82.9	75.4	85.1	72.4	3.41
August	0.88	82.0	76.1	84.3	71.1	2.59
September	1.13	82.3	77.1	85.9	74.4	5.29
October	0.61	84.1	77.1	85.2	74.5	6.10
November	6.03	85.1	76.6	88.5	72.1	8.60
December	14.75	85.4	76.2	88.2	74.0	13.24
Total :	89.39					90.85

Total Rainfall at Recording Stations

Mahe, Victoria	89.39 inches (at Meteorological Office)
Mahe, Mont D'or	96.01 inches (at 1,000 feet above sea level)
Mahe, Grand'Anse	81.36 inches (at sea level)
Praslin	73.72 inches (at sea level)
La Digue	64.72 inches (at sea level)

SECTION I

Agriculture, Fisheries & Forestry in the Colony

A. CROP HUSBANDRY

1. *Coconuts*

Production of copra for export was 5,600 tons in 1958, compared to 6,000 tons in 1957. As previously, all copra was sold by the Seychelles Copra Association. Prices realised were from £68.10 per ton f.o.b. in the early part of the year to £77 during the latter part. The average price was £72.19.3d. The local selling price ranged from Rs. 685 to Rs. 875 per ton, compared with Rs. 685 to Rs. 805 in 1957. The Association's cess remained at 2% and the export duty at 9%. All exports were to India, where Seychelles F. M. S. grade copra appears to obtain a premium.

Supplies of oil, poonac (coconut cake) and soap were adequate. The two coir factories continued to produce small quantities of fibre and cordage for local use.

Infestations of coconut palms by scale insects and mealy bugs, with resultant severe fumagine, continued on several coral islands. On certain granitic islands the coconut borer *Melittomma* and the coconut beetle *Oryctes* also continued to be serious pests.

An account of the visit of the Visiting Coconut Expert is given in Section II of the Report, which deals with the work of the Department.

Copra Production for Export and Actual Export 1954 — 58

Year	Production	(Value f.o.b.)	Export	Value (f.o.b.)
	Tons	Rupees	Tons	Rupees
1954	6,472	6,579,419	5,883	6,024,205
1955	5,846	4,730,530	6,313	5,190,018
1956	5,738	4,783,333	5,579	4,589,233
1957	6,000	5,257,398	5,900	5,176,198
1958	5,605	5,492,451	5,599	5,447,063

2. *Cinnamon*

Exports of cinnamon leaf oil increased considerably in 1958, compared to 1957, but were however lower than in preceding years and fetched much lower prices.

Cinnamon bark exports were, on the other hand, much higher than in previous years, on account of a reported acute shortage of Cassia barks on the European and American markets and the resulting high prices. Over 1,000 tons of bark were exported, which is nearly double the average export of recent years and which approaches the record export of 1,202 tons in 1908. Local selling prices reached unprecedented levels and ranged from Rs. 325 to over Rs. 1,000 per ton. It is to be hoped that the Seychelles produce will be able to stay on some of the new markets on which it was thus introduced.

Cinnamon quills exports declined in 1958, the total export being 5½ tons, with a f.o.b value of Rs. 27,500, compared to 8½ tons in 1957, valued at Rs. 35,000. The quality of this produce has however improved, due to the effort of the Department and of the few producers who are keenly interested in it. There is the hope that the Seychelles produce will be able eventually to capture part of Ceylon's trade in that commodity.

Reference to the crop of the Department will be found in Section II.

Cinnamon Leaf Oil Exports 1954 — 58

Year	Quantity in Tons	Value in Rupees (f.o.b.)
1954	99	1,388,294
1955	85	910,997
1956	95	899,494
1957	58	555,313
1958	82	582,026

Cinnamon Bark Exports 1954 — 58

Year	Quantity in Tons	Value in Rupees (f.o.b.)
1954	475	217,433
1955	415	167,667
1956	586	251,665
1957	596	268,430
1958	1,063	723,662

3. Patchouli

Little Patchouli oil and leaf were exported during 1958. Limited demands and low prices are responsible for the decline of that once remunerative peasant industry. Oil sold locally at about Rs. 35 per kilogramme and leaf at about Rs. 1,000 per ton.

Patchouli Leaf and Oil Exports 1954 — 58

Year	Oil Exports		Leaf Exports	
	Kilogrammes	Rupees (f.o.b.)	Tons	Rupees (f.o.b.)
1954	273	18,514	67	270,666
1955	436	34,491	38	141,200
1956	532	27,225	9	16,013
1957	1,200	50,450	7½	14,789
1958	103	4,156	10	20,468

4. Vanilla

For the third year in succession a good vanilla crop was obtained. As very remunerative prices prevailed also during the year, overseas auction prices varying from 45 shillings to 75 shillings per pound and local

selling prices ranging from Rs. 18 to Rs. 35 per pound, the revival of the industry, which was reported on previously, was stimulated. More areas have been planted under the orchid and increased attention was given by growers to their old plantations. Following a prolonged dry end of the South-East monsoon, which enhanced flowering, a good crop may also be expected next year.

Export of Vanilla 1954 — 58

Year	Quantity in Kilogrammes	Value in Rupees
1954	1,370	62,000
1955	522	16,380
1956	7,580	285,615
1957	4,245	195,182
1958	6,000	423,025

5. Other Crops

These include nutmegs, cloves, coco-de-mer (*Lodoicea*) nuts and a small quantity of Eucalyptus oils, which were exported. Apart from these, other crops grown only for local consumption consisted of coffee, tobacco, citrus, sugarcane and the usual range of tropical, sub-tropical and, to a much smaller extent, temperate climate food-crops.

B. ANIMAL HUSBANDRY

Livestock

No epidemics or serious losses occurred and, as reported last year, no increased interest in the keeping of livestock can be reported. This is attributable to the availability of fish and the very low purchasing power of the majority of the population. Cattle, pigs, goats, ducks, fowls, guinea-fowls and even a few turkeys, geese and donkeys are kept, but the numbers are small and hence animal manure is always scarce.

C. FISHERIES AND SUNDRY MARINE PRODUCE

1. Fish

Export of dry salted fish, including salted shark and shark fins, was lower than in 1957, as illustrated in the table below. The larger part of the export was to East Africa. Although there is a ready market in East Africa for salted shark, that for salted fish is limited.

Exports of Dry-Salted Fish (Including Shark & Shark Fins)

Year	Tons	Value in Rupees (f.o.b.)
1954	90	81,247
1955	189	159,231
1956	240	213,103
1957	183½	169,669
1958	147	133,788

2. *Green Turtles*

Green turtles, which are mainly obtained from the Aldabra atoll, situated some 630 miles from Mahe, were as usual on sale at Victoria. The calipee and calipash from these reptiles continued to fetch remunerative prices. The recorded export is 774 Kilogrammes, valued at Rs. 16,420.

3. *Bêche-de-mer*

A revival in this industry, due to better prices, was noted in the 1957 Annual Report. Following these improved market conditions export in 1958 was nearly double, 1,621 Kgs., valued at Rs. 12,025 having been exported, compared to 850 Kgs., valued at Rs. 2,800 in 1957.

4. *Sea Shells*

The overseas demand for *Turbo*, oyster and other shells continued to decline in 1958, some 4 tons having been exported, compared to 29 tons in 1957.

5. *Hawksbill Turtles*

Tortoiseshell, from the Hawksbill turtle, was in greater demand from overseas in 1958, 1,621 Kgs. having been exported compared to 825 Kgs. in 1957, but prices were not remunerative.

D. MINERALS

There was a greatly increased export of bird guano and phosphatic rock in 1958. Some 16,805 tons, valued at Rs. 699,403, were exported, compared to the export of 6,234 tons, valued at Rs. 239,949, in 1957. This was due to the temporary re-opening of one of the leased island Crown Lands.

E. ZOOLOGICAL SPECIMENS & SEA BIRDS & THEIR EGGS

1. *Giant Tortoises*

The export of 18 specimens, with a f.o.b. value of Rs. 1,080, was permitted.

2. *Sea Birds and their Eggs*

The collection and local consumption of the nestlings of Wedge-tail, Shearwaters and of the eggs of Sooty Tern and Common Noddy continued. The following are declared landings of eggs from islands :

Island	Sooty Tern Eggs	Common Noddy Eggs	Unspecified Eggs	Total
Aride	149½ Cases	Nil	Nil	149½ Cases
North Cousin	Nil	"	"	Nil
South Cousin	28 Cases	2 Cases	"	30 Cases
Farquhar	Nil	Nil	30 Cases	30 Cases
Frigate	"	"	125 Cases	125 Cases
Desnoeuvs	"	"	Nil	Nil
Bird	"	"	"	"
Recif	"	"	24 Cases	24 Cases
	177½ Cases	2 Cases	179 Cases	358½ Cases

It can be assumed that each case contained an average of 700 eggs. Eggs were sold at around 5 cents each.

F. FORESTRY

No reports of any notable efforts by the public to improve or increase area under forests were reported. Severe bush fires, which occurred during an exceptionally dry end of the South East monsoon, caused the loss of some 3,000 acres of scrub vegetation, mostly cinnamon, in Mahe.

G. PESTS, DISEASES AND VERMIN

Attempts at control of pests, diseases and vermin, which were solely the work of Government, are described in Section II of this Report.

SECTION II

The Work of the Department of Agriculture

Owing to the absence of the Agricultural Officer, who was on further training, to the late arrival (in June) of the new Forester and of the Land Settlement Officer and to the departure on overseas leave, prior to transfer, of the Director, the technical staff was again overburdened with routine duties and had little time to devote to work in the interests of the public during the major part of the year under review. With the arrival of the new Forester timber sawing, to supply the Public Works Department, was resumed. The time consuming clerical work, referred to in the 1957 Annual Report, increased with the launching of new development schemes, like the Land Settlement Scheme, and added to the burden of the depleted staff.

1. *Crown Lands*

The area of Crown Lands remained unchanged and, as reported last year, consists of some 15,000 acres, of which about half is leased and the remainder operated from 16 stations ranging in size from 1 man guardian posts to those where a hundred men and women are employed.

(a) *Direct Production on Crown Lands*

Coconuts: The situation is still as reported in the 1957 Annual Report, a large number of coconuts being lost through praedial larceny. The treatment of all the Melittomma-infested coconut palms of Grand' Anse estate, which took one year, was completed in June; this involved the inspection of 7,799 palms and the treatment and the loss of 4,633 palms and 902 palms respectively, most of the lost palms being chlorotic and stunted ones which were felled because they were not worth the treatment. Cleaning continued on a regular basis on Ste. Anne and Curieuse islands, and at Grand'Anse, Foret Noire and Union Vale estates. Due to the intention to transfer the major part of Anse Boileau estate to the Land Settlement Scheme for allocation to small-holders, little expenditure on cleaning was incurred on that estate. From January to April 400 coconut trees were tapped for toddy on Union Vale Estate, to supply the Victoria Bacca Club, which was short of bacca.

The following is the collection and disposal of coconuts from unleased Crown Lands in 1958 :

Collection and Disposal of Coconuts from Unleased Crown Lands

Origin	Nuts Collected
Grand'Anse	187,905
Anse Boileau	212,847
Foret Noire	105,802
Union Vale	44,000
Ste. Anne Island	288,597
Minor Mahe Crown Lands	19,306
Curieuse Island	167,265*
Long Island	14,313
Praslin Crown Lands	10,481

1,050,516

* Including 48,775 nuts from Leper Settlement.

Disposal of Nuts

Stock 1. 1. 58	21,636	Converted into Copra	699,225
Collection 1958	1,050,516	Sold & free issues	348,052
		Bad Nuts	3,564
		Stock 31.12.58	21,281
	1,072,152		1,072,152

Copra Production & Disposal (Kilogrammes)

Stock 1. 1. 58	4,590	Consigned for export	99,670
Production 1958	100,063	Consigned for milling	3,448
		Sold by tender (2nd. Grade)	798
		Write off	30
		Issued to Livestock	136
		Stock 31. 12. 58	571
	104,653		104,653

Conversion Rates

Average number of nuts per ton of copra

Grand'Anse	5,998
Anse Boileau	7,568
Foret Noire	6,246
Curieuse	7,935

Cinnamon : Except for a small lot of cinnamon bark, which was collected on hill-sides which were being bench-terraced under the Land Settlement Scheme, and except for the production of cinnamon quills and quillings for overseas grading export, all Crown Land cinnamon was cropped and sold by tender. 804 tons of cinnamon leaves, 516 tons of undried cinnamon bark and 2,147 Kgs. of dried cinnamon bark were sold. No cinnamon leaf oil was distilled at the Central Distillery and the Grand'Anse Distillery, which remained idle.

Sugarcane and Bacca : Sales of cane to the Victoria Bacca Club in 1958 totalled 166 tons. 10,360 bottles of bacca were purchased from the Victoria Bacca Club for sale to labourers on Grand'Anse Estate.

Food-crops : The Department's production was restricted to that from the Sans Soucis gardens (which were closed towards the end of the year), to the Souvenir citrus plots and to crops from bread-fruit trees and felled coconut trees on various Crown Lands, which were all supplied to Government institutions or fed (in the case of bread-fruits) to Government cattle.

Livestock : See Section II (3)

Forestry : See Section II (2)

(b) *Gardens & Sport Grounds*

The Department supervised the upkeep of the Botanical Gardens, Government House grounds, Fiennes Esplanade and Gordon Square and supplied labour for work in the Hospital garden. As in preceding years, special displays of local produce, fruit and timber were arranged for visitors of the cruise-ship "Caronia" on her annual visit.

(c) *Demonstration areas on Crown Lands*

Union Vale estate (dairy herd, clean milk production, silage pits, elephant and paspalum grass, and maize on terraces, cattle dipping, Large White Pigs, R. I. R. and other poultry) and the market gardens operated by the Senior Forest Ranger and the Manager of Grand'Anse, and the Sans Soucis vegetable gardens, continued as useful demonstration areas, as did some, but not all, aspects of Grand'Anse Estates.

In September, 1958, a start was made to create a Demonstration Plot, under the Land Settlement Scheme, to be supervised and held by the Technical Officer of the Land Settlement Scheme. By the end of 1958, 1½ acres of marsh land had been drained and planted with rice which, after initial troubles, promised well. In the flat area cassava, sweet potatoes, tomatoes, beans, egg-plants and other vegetables, as well as pawpaws, and bananas, were planted and yielded well. On the bench-terraced hillsides, pineapples, coffee and elephant grass, for fodder, were grown, and also promised well. This Demonstration Plot, it is hoped, will set an example to small-holders of the Land Settlement Scheme and other small farmers on intensive land use for growing food-crops and subsidiary export crops.

(d) *Leased Crown Lands*

Land Settlement Scheme : A Land Settlement Officer was appointed and assumed duty in June, 1958. As a result the bench-terracing of

hill-sides on the Government estates and Crown Lands at Rose Belle, Anse Boileau, Grand'Anse and Foret Noire, which had been started in 1957, was greatly accelerated to provide 2 to 2½ acres of bench-terraces per 5 acre plot which it is intended to lease to small-holders. By the end of 1958 bench-terraces for some 85 such holdings had been completed. It was expected to complete the terracing work on 100 holdings by March 1959 and to settle 100 smallholders on these holdings by March 1960. Each holding will be provided with a model 2-roomed cottage, an "aqua-privy" and a pig-sty concrete floor, for the cost of Rs. 3,000. The cost of terracing, which reached over Rs. 1,000 per acre of bench-terraces at the beginning of the Scheme, through organization and better training of terracing teams, had been reduced to less than Rs. 600 per acre by the end of the year. This scheme, which is one of the most important Colonial Development and Welfare Schemes of the Colony, should have important economical and social effects by increasing the production of food-crops and likely subsidiary export crops, like coffee, on now little-used land, and by creating a population of small farmers from the quickly increasing population of the already over-populated Colony.

The 27 small-holdings previously leased for settlements, which were directly supervised by the Director and the Government estate managers on the departure of the Agricultural Officer, came under the charge of the Land Settlement Officer on his arrival.

Other Leases : Of the larger lease-holds the leased portion of Ste. Anne island and Marie-Louise island were visited during 1958.

2. Forestry

General

A total of 17 acres were planted before the arrival of the new Forester in June, work having continued on a "care and maintenance basis" since the departure of the previous Forester in October, 1957.

Further planting during the South East Monsoon was rendered impossible by the drought which prevailed from August to the end of November.

The need to re-afforest the Crown Lands burnt during 1958 has created a task of planting over 150 acres in the shortest possible time. Le Niol was the first area tackled ; up to the end of the year 29 acres had been planted there. At Grand'Anse and Souvenir a further 15 acres were ready for planting by the end of 1958.

As a result of this extra planting, plus a little anti erosion work on the La Misere Road, above Grand'Anse, the total planted area for 1958 was 49 acres. The total area re-afforested until the end of 1958 was 2,229 acres.

Sylvicultural Techniques

Advantages derived from complete mulching in the forest amongst young trees, up to the closing of canopy, has been proved beyond doubt. As a result of mulching growth is maintained without "checks". Healthy growth and continued wood and leaf production produce improved humus deposits, lower the soil temperature, increase the soil bacteria and kill harmful weed growths, the foremost of which is "Cazontraille" (*Panicum parvifolium*).

Finding suitable quantities of mulch, which by their proximity are economic propositions, presents a problem however. Trials have been conducted to overcome the shortage of mulching material by growing shoots of Citronella grass (*Cymbopogon nardus*), which was proved to be drought resistant and capable of quick growth after rains. Tussocks of this grass produced 12 inch shoots a fortnight after cutting, which demonstrates its reproductive power. It is hoped that Citronella grass will produce the needed mulch. There is no danger of the grass choking the young trees, as it will be cut down regularly and will gradually die out as the canopy closes.

Colonization Pit Work — Newcome

Efforts to re-afforest the remaining acres at Newcome, in Praslin, continued. "Colonization Trench" characterizes this type of work. The trial, which started with small pits 1ft. deep by 1ft. wide by 5ft. long, has now been logically extended to run the length of the particular contour on which it is sited. Coco Plum and Takamaka, both of which are ideally suited for direct sowing in the trenches, gave steady progress. To help cover the intervening land shoots of sword grass, which occurs naturally, were planted to act much in the same way as Citronella.

Fires

A prolonged drought producing highly dangerous fire conditions culminated in the first outbreak, on 8th October, at Cascade, which spread to La Misere on private estates. Little supervision, combined with difficult terrain, resulted in troublesome flare-ups a fortnight afterwards.

While the latter fire was being fought, on the 21st October another fast moving one which started on a private estate, at Le Niol, swept upwards a distance of 3 miles in 15 minutes. Fanned by strong seaward breezes, it crossed the Crown Forests fire boundary in three places before being controlled. Unfortunately the fire continued to spread, burning for 3 days and destroying an estimated 1,000 acres of private property.

The third fire, which started at Souvenir, on the 3rd. November, could not be controlled; it travelled to the hills overlooking Grand'Anse before being extinguished, burning an estimated 600 acres of Government Land.

In all these fires the rapid spread was caused by the (*Gleichenia dichotoma*) Bracken Fern, which made any attempts at containment impossible. There is no doubt that the eradication of Bracken Fern, would reduce fire risk by 75%. Complete destruction of fern may sound a difficult proposition but it is in actual fact possible, due to the fern susceptibility to "cutting back". A planned attack on all land, Government and private, to cut all regrowth could end in the extermination of Bracken Fern within two years.

Vanilla

Flowering of vines during the latter part of the year showed great promise; for three weeks, at Sans Soucis, over 1,000 flowers per day were pollinated. These plots are spread over approximately 5 acres of plantations, comprising Santol, Takamaka, Sandragon and Agati, which act as supports for the vanilla vines.

Of all the species under which vanilla is grown, *Sandragon* appears to be the best suited to the technique required in successful vanilla production. This is important, as forestry is our foremost consideration, vanilla being only a catch-crop. Because *Sandragon* is such a virile tree, producing shoots readily, to thin it heavily at a time when light is required for vanilla flowering does not adversely affect its ultimate growth ; it does in fact improve the stem form of *Sandragon*.

In view of the success to date it would seem desirable to extend the vanilla plantations wherever conditions are suitable. However, as it was found during the early part of 1958 that substantial numbers of vanilla beans were stolen from the plantations, it has been decided that further extension will be carried out only when new workers' houses will have been built in the forest. The plots of vanilla could then be sited near habitations, which will ensure their protection from theft.

Results from Introduced Species

Swietenia Mahagoni : Only succeeds under optimum conditions. It has been planted in mixture with other species to distribute its small numbers over the largest possible area, in order to produce final crops of *S. Mahogani*. It is very intolerant of competition for light from other trees and the best plantation, proving the exception to the rule, is at Newcome planted pure.

Swietenia Macrophylla : Undoubtedly the best introduction to date over all site conditions planted as a mixture. It is preferable in large gaps of already established crops and is still capable of competing with its neighbours for light.

Khaya Nyassica & *Khaya Senegalensis* : Both show promise, although not proved on all sites. Further quantities of seed are expected.

Grevillea Robusta : Will tolerate exposure and poor soils, proving a useful introduction. More plantations will be established in 1959 from imported seed.

Cedrella Mexicana & *Cedrella Odorata* : Main trials of these species, laid down at Grand'Anse, are not fulfilling the expectation first entertained. They are most intolerant of competition from other trees, break easily in wind. Moreover their early spectacular height growth has now fallen off.

Pine Species : There can be no future for these trees until a successful method is devised to introduce mycorrhiza fungal growth necessary for healthy pine development into Mahe's forest nursery soils. This inoculum can only be imported in soil, or as a live "culture" from a laboratory. The former method is not allowed by law ; the latter is not certain to succeed.

Timber Exploitation

With the departure of the former Forester in 1957 all exploitation of timber ceased. By the time of the new Forester's arrival, shortage of sawn timber for the Public Works Department requirements was becoming acute. Although the Director of Agriculture had laid down the principle of non-involvement of Forestry Division labour in timber production, it was decided to re-open exploitation as a temporary measure, while a new solution to timber production was sought.

A start in this direction was made when invitations to interested timber exploiters were published, offering trees standing or felled, to be purchased. Surprisingly, this aroused little enthusiasm and the few persons who did inspect the offered trees made unsatisfactory tenders. As there is no lack of outlet for the sawn timber in Mahe, this cannot explain the lack of interest ; it would seem that the only persons with exploitation "know how", although willing to purchase, are lacking in capital. Some form of timber sawing co-operative, whereby resources could be pooled to purchase parcels of timber, might be the answer.

Summary of Forest Produce 1958

Timber Running Pest

Species	Planks	Madrier	Beans	Posts
Albizzia	4,697	8,370	965	—
Agati	292	—	—	—
Bois Rouge	—	—	—	379
Capucin	—	—	—	121
Eucalyptus	—	3,957	—	232
Santol	803	1,028	—	—

Other Forest Produce

Cordwood	53½ cords
Vanilla	1,213 beans
Cloves	124 Kgs.

3. Veterinary Work & Livestock

The Stock Inspector, Mr. Donald Morgan, was available to the public for advice and veterinary treatment so far as his supervisory and other duties permitted.

Veterinary & Quarantine Work : The clinic at Union Vale was operated as usual, charging nominal fees or giving free treatment where owners were certified as being unable to pay. The Stock Inspector, who has not had the training of a veterinarian, to a very large extent performed the duties of one. In addition to minor dressings he carried out :

Clinical examinations	201
Burdizzo castrations	10
Open method castrations	20
Fowl-pox vaccinations	60
Smears	4
Faecal examinations	10
Ovariectomy (cats & bitches)	5
Hysterotomy (cats, bitches & pigs)	4
Other minor operations	12

Coccidiosis was detected among the dairy cattle of Union Vale again in 1958. Two cows and four calves were treated.

8 cage birds, 3 head of poultry, 3 rabbits and 3 dogs were successfully quarantined in 1958. 30 giant land tortoises, 2 pigs, 2 dogs and one cat were inspected and certificated prior to export.

Stock and Husbandry Improvement Work : The following were sold to the public by auction from the Department's herds, which totalled 251 at the end of the year :

Cattle (largely Sindhi X Friesian)	18
Pigs (Large White)	36
Poultry (R. I. R.'s Cross)	24

Eight stud-bulls (Friesians and Sindhis) were stationed on various Government estates and on private estates.

Silage pits at Grand'Anse and Union Vale were filled with elephant grass and maize. As usual, the product was perfect and was of great help during the dry and fodder-short South-East monsoon.

583 gallons of diluted toxephene insecticide (for buffalo-fly control) were sold, as were mineral supplements, dairy disinfectants and a number of other sundries for stock owners, at non-profit prices.

All adult Government cattle were tested for tuberculosis during the year. No cases were detected.

Union Vale Dairy : An average of 70 cows in milk were maintained at Union Vale and yielded an average of 3,010 pints per animal. 184,917 pints were supplied to Government Institutions and to some 200 customers and 25,755 pints were fed to calves.

4. Produce Inspection & Laboratory Work

Mr. J. F. G. Lionnet remained responsible for the inspection of produce prior to export and for the laboratory work of the Department. He was also concerned with the trials of insect parasites and predators and other entomological work, and was responsible for import permits and export certificates in connection with plants and plant parts.

(a) Inspection : As in previous years, the Produce Inspector stationed at the Custom Sheds was responsible for the inspection and sampling, when necessary, of copra, cinnamon bark, dry patchouli leaf and salt fish. In general the quality of the produce deposited for export was of a good standard. There were the usual lots of copra and other produce which were rejected for too high a moisture content, improper preparation, etc.

(b) Laboratory : The laboratory dealt with 921 samples of produce for export, fermented liquors and miscellaneous items, as compared with 703 and 892 in 1956 and 1957 respectively. A large part of the work continued to be provided by the export of cinnamon leaf oil, 359 samples being taken for laboratory examination. One sample of cinnamon leaf oil was found adulterated with mineral oil (kerosene).

The following records the results of examinations of fermented liquors in recent years. These samples are the results of seizures by the Police and may consist of fermented sugarcane juice, fermented coconut toddy or liquors known as "La Puree", which may have been fermented from a variety of substances :

	1954	1955	1956	1957	1958
Number of samples of fermented liquors examined	275	100	238	428	398
Percentage of samples found to be "La Puree"	27.5	36.0	15.5	19.9	29.4

Germination tests of temperate-climate vegetable seeds, imported by the Department, were carried out prior to and during the period the seeds were on sale to the public.

The Laboratory personnel was also engaged during the year in curing a small lot of vanilla, the first crop to be collected, from the trial plots of vanilla in the re-afforested areas of the Central Massif, in Mahe, and in preparing maize baits containing soluble anti-coagulant rat poisons for trials.

Lime, cattle-dip and miscellaneous samples were examined and reported on.

5. *Inspection of Plantations*

The two inspectors (Mr. A. Gendron and Mr. E. Pool) spent much time on other Departmental duties. Inspection work is largely concerned with the granting of permits under the Laws governing the felling of trees in river reserves, the lighting of fires and the felling of breadfruit and jack-fruit trees. Inspectors also carry out valuations of crops for the Labour & Welfare Officer in cases of dispute arising out of share cropping. During part of the year, up to September, one of the inspectors also assisted the Police with coconut yield estimates in cases of suspected illegal produce dealing. Requests from the Police for assistance ceased when the Director defined the exact conditions under which such technical assistance could be scientifically sound.

6. *Investigations, Trials, Extension Work & Services in the Interests of Producers*

Investigations and Trials.

Coconuts : The year under review saw the visit of the Coconut Expert, Mr. F. C. Cooke, former Director of the Coconut Research Institute of Ceylon, consultant to F. A. O. and Editor of "World Crops", from the 16th of April to the 3rd May, during which he made an extensive tour of the coconut plantations of the Colony, including out-lying coral islands of the Amirantes Group. His findings, which are contained in his "Report on the Coconut Industry", which was published by the Seychelles Government at the end of 1958, are summarised in paragraph 19 of the Report, which reads as follows :

"As a result of my survey, I have reached the conclusion that the productivity of the coconut industry reached its peak in 1952 and started to decline in 1955 but the gravity of the economic situation is aggravated by the steady increase in domestic consumption. Since the maximum area possible is now under coconuts and as the quality of the copra exported is quite good, any increase in the national income from this crop can only be achieved by the effective control of pests, by the proper replacement of unproductive and dying palms, and by proper attention to cultivation and manuring."

His main recommendations, which number 29 and are contained in Appendix VI of the Report, are as follows :

1. The eroded lateritic lands, which were formerly under coconuts, should be rehabilitated and put under another crop, but should not be replanted with coconuts.

2. The alluvial swamps, similarly, should be drained and used for the cultivation of paddy and not replanted with coconuts.
3. Crests of smaller hills and mountain ranges should be treated as watersheds and scheduled as reserved areas.
4. As a general principle, neither cinnamon nor casuarina (i. e. Seychelles cedar) should be grown in association with coconuts. There is no objection to deep-rooting jungle trees e. g. Takamaka.
5. On the upper slopes, cinnamon should be treated as the major crop and all non-yielding palms should be removed forthwith.
6. On the lower slopes, coconut must be the sole crop. The existing inter-planted cinnamon should be gradually cut out and any vacancies should be filled with coconuts.
7. People should be distributed over the areas of coralline sand and not concentrated in villages or labour lines. They should be encouraged to keep cattle, pigs and poultry.
8. The nutrient status of all the soils in the Seychelles needs to be improved and various measures are recommended.
9. The use of locally-available manures and chemical fertilizers should be developed by the establishment of a fertiliser factory for compounding these materials to suit different soils.
10. The increased use of manures and fertilisers should be ensured by means of a Fertiliser Subsidy Scheme or a special discount allowed by a fertiliser company for a limited period to introduce the use of chemical plant foods to the industry.
11. A survey should be made to determine the extent and value of the guano deposits, now remaining.
12. Application should be made for the loan of an Agronomist together with necessary equipment, for two periods of two years to study the soils of the coconut areas.
13. The appointment of a special Coconut Officer is an essential step to the rehabilitation of the coconut industry. He should be responsible for the establishment of coconut nurseries and the production of cover crop seed and cuttings and all advisory and propaganda work for the industry.
14. A Coconut Replanting Scheme, with selected seedlings to be produced in the Government nurseries and sold to the public at a reduced price, should be initiated.
15. Estates should make a palm census.
16. The Copra Inspector (who could in future be the Coconut Officer) should inspect all copra kilns and make a report.
17. Possible minor industries are the production of edible white copra for the Indian market, of coconut chips and coconut honey, and coir products, including wall boards.
18. A serious handicap to the development of minor industries is the inadequacy of the power supplies. Power is also needed to reduce the drain on soil fertility through the excessive use of organic fuels.

19. The functions of the Department of Agriculture should be curtailed. The management of the unleased coconut lands should not be its responsibility, and its supervision and inspection work should be reduced.
20. The unleased coconut lands should be gradually sold off, or else leased to experienced planters or selected smallholders.
21. A Pilot Settlement Scheme should be established on Ste. Anne Island and the requirements are considered.
22. A Government Research and Experimental Station should be properly maintained at Grand'Anse. Two or three hundred acres of land should be reserved for this purpose and the rest released.
23. A Progress Report on the Mellitomma Control Pilot Scheme on Praslin should be prepared and submitted to the Commonwealth Institute of Entomology.
24. Application should be made for a Visiting Entomologist to consider the Report, inspect the work in progress, and make recommendations for the extension of this work.
25. Planting leaflets on specific aspects of coconut growing and expressed in simple language and printed in both French and English, should be issued and sent free to all landowners at monthly intervals.
26. Pest weeks should be organised as a combined operation.
27. There should be more liberal income tax abatements for capital expenditure on coconut estates and for the necessary provision of schools, creches, and dispensaries in remote areas.
28. All import duties on agricultural machinery, equipment and implements should be removed.
29. The coconut industry could assist in the development of the tourist industry.

Some of these recommendations, such as a Fertiliser Scheme, the appointment of an Entomologist and an Agronomist, were under active consideration by Government in 1958. At the time of writing both the Entomologist and Agronomist have been appointed and are expected to assume duty early in 1959. On the other hand the Government has had to abandon the idea of obtaining the services of a Coconut Officer of the calibre which the Coconut Expert recommended. Instead the Agricultural Officer, during this post-graduate studies at the Imperial College of Tropical Agriculture, in Trinidad, will specialise in coconut and will be expected to take charge of the implementation of the recommendations made by the Coconut Expert for rejuvenating and re-habilitating the all-important coconut industry, such as the establishment of a coconut nursery and the production of cover crop seed.

From the 20th October to the 1st November the Colony received the visit of Dr. Paul Surany, an entomologist of the South Pacific Commission, who was carrying out a world-wide field survey of the coconut rhinoceros beetle. Dr. Surany visited the main granitic islands, especially Praslin and La Digue, where *Oryctes monoceros* Ol. is a troublesome pest of the coconut plantations, and one coral island : Denis Island.

In the course of this visit Dr. Surany collected numerous live and dead specimens, which he took away with him to his Headquarters, in Kikuyu, Kenya Colony. It will be interesting to find out whether the difference in virulence of the local rhinoceros beetle, which varies from island to island, may be attributed to one or more of the many natural controlling agents which Dr. Surany has been investigating in his world-wide survey, such as two diseases termed "Hystolytic Disease" and "Blue Disease", whose causative organisms and mode of transmission are not known.

As reported in the 1957 Annual Report, the first tour of treatment of all coconut palms on the island of Praslin, under the Melittomma Control Scheme, was completed by the 31st January, 1958, in the course of which some 58,585 palms were treated, using paradichlorobenzene as a fumigant, and some 13,473 palms were felled. This was followed by a complete survey of the Praslin coconut palms, which indicated a large reduction in the Melittomma population of the Praslin coconut groves. This Praslin anti-Melittomma campaign will be assessed by an entomologist in 1959. Pending the arrival of the entomologist, the staff engaged in the above work was transferred from Praslin to Government estates in Mahé, in October, where it was employed in anti-Melittomma work.

Two new coconut pests were recorded in the Colony in 1958. They are the Long-tailed Mealy Bug *Pseudococcus adonidum* (L.), which was seen on Poivre and Darros islands, of the Amirantes Group, and the scale insect *Lopholeucaspis cockerelli* (De Charm), on Alphonse island. The latter is not considered an important pest, but the former was reported to have caused severe infestation of coconut on one of the Poivre islands. Steps have been taken to obtain parasites and predators of this pest from the Californian Station of the Commonwealth Institute of Biological Control.

In March, 1958, a consignment of beneficial nematodes of the genus *Rhabditis* was received from Fiji, for a trial in the control of the coconut rhinoceros beetle. The nematodes were bred in the Laboratory of this Department but after a time lost their virulence. None were therefore liberated. Steps have been taken to import more consignments.

Collection and distribution of coccinellid predators of scale insects and parasites of the Citrus Black Fly were effected on several occasions in 1958. The former were shipped mainly to Poivre and Alphonse islands, especially to the latter where severe infestations of the scale insect *Eucalymnatus tessellatus* Sign. occurred. The Citrus Black Fly parasites were distributed on Mahé and other granitic islands.

Cinnamon: Several small consignments of cinnamon quills and quillings made on the Grand'Anse estate, were dispatched to a London firm dealing in this produce during the year for grading. Although the Seychelles produce was reported to be inferior quality to the Ceylon one, considerable interest has been shown in those consignments. It was even intimated that the Seychelles produce could capture part of Ceylon's trade in that commodity. The prices fetched by the last consignment from the Department in 1958 were 5/6 per lb. of quills and 4/9 per lb. of quillings. A private producer was reported to have obtained even better prices. The Department is producing and is recommending the production of tightly rolled, light coloured, 6 inch quills, tied in 1-lb. packets, consisting of some 100 quills per packet, which appear to be the requirements of the London market.

Rice : In Section I a rice growing trial, in a drained marsh of the Demonstration Plot of the Land Settlement Scheme, was described. A trial was also carried out at Grand'Anse, where a small area was planted with Radin Siak II, a salt water resistant strain, and trials laid down with the view to establishing the best method of transplanting in the Seychelles. A yield of 634 lbs. was obtained from the above area in 1958, which is equivalent to 3,170 lbs. per acre. It is hoped that these trials will encourage private land-owners to grow rice on their little-used marshy lands which, after drainage, could probably produce part of the Colony's import in rice, which is the staple food of the population.

Robusta Coffee : The Robusta Coffee plot, of approximately $\frac{1}{4}$ acre in area, on which it was reported last year, yielded an average of $5\frac{1}{2}$ lbs of green coffee per tree, which is equivalent to 5 cwt. parchment per acre. A satisfactory sample was valued at £290 per ton in Kenya. This same plot was also bearing heavily towards the end of 1958.

One acre of Robusta coffee has been planted on bench-terraces on the Land Settlement Experimental farm at Souvenir. As reported under Section I, Robusta coffee has also been planted on bench-terraces of the Land Settlement Demonstration Plot. Some 8,000 seeds have been planted to produce seedlings for distribution to the Land Settlement Scheme small-holders and for sale to the public. It is hoped that private planters will eventually grow Robusta coffee as a subsidiary crop for local consumption and for export.

Steps have taken to try imported parasites of the coffee green scale *Coccus viridis* (Green), from East Africa.

Vanilla : A small crop (the first) was obtained last year from the vanilla trial in the re-afforested areas. Flowering has been good in 1958 ; a bigger crop should therefore be obtained in 1959.

Predacious Snails : The predacious snail *Gonaxis quadrilateris* Preston, which was imported from East Africa in 1957 and liberated on Mahé and Cerf Islands for a trial in the control of the giant *Achatina* snail, was recovered on Cerf island one year later. Another consignment was received and liberated on Mahé and Praslin islands in 1958.

African Barn Owl : The African Barn Owl (*Tito alba*), which was introduced in 1949, 1951 and 1952 to control rats in coconut plantations, appears to be breeding and spreading. It has been observed on Praslin, Silhouette, North and Aride islands, which are 21, 18, 19 and 28 miles respectively from Mahé, where it was liberated originally. There are indications that this owl is feeding partially on White Terns, but there has been, apparently, no decrease in the White Tern population. There has also been unconfirmed reports that owls have been preying on chickens and moor-hens.

Extension Work and Sundry Services in the Interest of Producers.

1. Veterinary treatment, drugs and sundries : See Veterinary Work & Livestock.
2. Quarantine facilities for animals : See Veterinary Work & Livestock.
3. Export certification for animals : See Veterinary Work & Livestock.
4. Stud bull services : See Veterinary Work & Livestock.

5. Sale of cattle, poultry and pigs, for breeding or for slaughter : See Veterinary Work & Livestock.
6. Tested vegetable seeds sold at non-profit prices : 1,732 packets of vegetable seeds in 9 varieties were sold to the public, the germination rate being checked frequently.
7. Planting material of food and cash crops issued free or sold at nominal prices : Numerous cuttings of vanilla and Greater Yam, and Malayan Dwarf Green coconuts, as well as cuttings or plants of ornamentals, from the Botanical Gardens, were supplied to the public.
8. Imported fertilizers, insecticides, rats poisons, etc., sold at non-profit prices : Sulphate of ammonia, muriate of potash, gammexane caterpillar spray, Paris Green, lead arsenate, metaldehyde, zinc phosphide and other rat poisons, and paradichlorobenzene, were sold to the public. In September the Medical Department assumed the responsibility of distributing some of these more poisonous pesticides and raticides.
9. Laboratory analyses : See Agricultural Chemist's Report.
10. Produce Inspection and quality certificates : See Agricultural Chemist's Report.
11. Inspection of plant imports and inspection and certification of plant exports : See Agricultural Chemist's Report.
12. Demonstrations : Parties of student teachers, planters and small-holders visited the Experimental Souvenir Farm and the Demonstration Plot of the Land Settlement Scheme. Market gardening was demonstrated by the Senior Forest Ranger and the Manager of Grand'Anse estate on plots cultivated by them. Cinnamon quill manufacture was demonstrated at Grand'Anse to visitors, and tourists, at the Botanical Gardens during the annual exhibition of local produce held for the "Caronia" tourist ship. The Melittomma Assistant stationed at Grand'Anse gave several demonstrations of the treatment of coconut trees infested with the borer *Melittomma insulare*.
13. Advisory Work : Advice was frequently given to planters on request on a variety of subjects. A leaflet in French on vanilla entitled "Le Vanillier et la Vanille dans le Monde", was published and reproduced in the local press. Various items on vanilla, coffee, rice and forestry were communicated to the Seychelles Government Bulletin and the local press for publication. A paper, entitled "Seychelles Vanilla", by the Agricultural Chemist, was published in the December 1958 and January 1959 issues of "WORLD CROPS". Also, as noted in the 1957 Annual Report, among the formidable volume of incoming and outgoing correspondence (totalling some 5,000 papers, exclusive of vouchers, issue and receipt notes and most internal memoranda) were a number concerned with advisory work.
14. Valuation and crop estimates : See Plantation Inspector.
15. Distillation on demand : One lot of *Eucalyptus staigeriana* oil was distilled experimentally at the Central Distillery for a planter.
16. Distribution of beneficial insects : Eddy wasp parasites of the Citrus Black Fly and Coccinellid predators of scale insects and mealy bugs were collected and distributed on request.

17. Fire-fighting: The Staff and the labour force of the Department were actively engaged in the fighting of large forest and bush fires which threatened the unique coco-de-mer palm Vallée de Mai of Praslin island in April and burnt some 3,000 acres (mostly privately-owned) of cinnamon and other scrub land on Mahé later on, during the very dry end of the South-East Monsoon.

SECTION III

Legislation

The following legislation was enacted during the year under review:

Ordinance No. 5 of 1958, an ordinance to amend the Plant Pests Ordinance, which gives increased power to the Director of Agriculture for controlling the conditions under which plants and plant parts may be imported into the Colony.

Ordinance No. 7 of 1958, which is an ordinance providing for the delineation of the boundaries of properties deemed to form part of the Domaine Public, for the withdrawal of any specific area from its classification as Domaine Public and for declaration in cases of doubt that any specific property forms part of the Domaine Public or of the private property of the Crown.

Ordinance No. 10 of 1958, which is an ordinance giving certain powers to surveyors carrying out a cadastral survey of the island of Mahé and of certain other islands.

SECTION IV

Staff and General

1. Staff

Mr. A. Jefferiss, B.Sc. Hort., N.D.H., continued as Director, assisted by the Agricultural Chemist, Mr. J. F. G. Lionnet, Dip. Agric. (Maur.), the Forester, Mr. F. Strawbridge, the Land Settlement Officer, Mr. F. V. Fenton, the Stock Inspector, Mr. D. Morgan and the Chief Clerk, Mr. J. Laye-Sion. Mr. A. Gendron, Mr. E. Pool and Mr. J. Dookly continued in supervisory positions.

In June the new Forester, Mr. F. Strawbridge, and the first Land Settlement Officer of the Colony, Mr. F. V. Fenton, assumed duty. In August the Senior Forest Ranger, Mr. R. Dubuisson, was promoted Technical Officer of the Land Settlement Scheme. In September Mr. A.O. Moulinié returned from 2 years training with the United Kingdom Forestry Commission and was promoted Assistant-Forester. The Agricultural Officer, Mr. S. M. Savy, who was away during the whole year, completed successfully his post-graduate studies at Cambridge and proceeded to the British West Indies for further post-graduate studies at the Imperial College of Tropical Agriculture of Trinidad. In September the Director left on overseas leave prior to transfer as Principal Agricultural Officer, Northern Nigeria. The Agricultural Chemist was Acting Director of Agriculture from September to the end of the year.

It is fitting to record here the good work accomplished by Mr. A. Jefferiss during the 5 years that he was Director. He was appointed to the post of Director at a crucial moment, when major changes in policy were envisaged. Due to his exceptional abilities, his experience and his energy those changes were successfully initiated; together with important development schemes, they will have profound beneficial effects on the Department and the Agriculture of the Colony.

It gratifying to be able to record the award by Her Majesty the Queen, in the New Year Honours List, of the British Empire Medal to Mr. Ephrem Pool, Agricultural Assistant, Praslin, for his devotion to duty while fighting a large forest fire on Praslin island, in April, 1958, which threatened the unique coco-de-mer palm Vallée de Mai.

2. General

Four meetings of the Agricultural Board were held in 1958. Two of them were convened during and in connection with the visit of the Visiting Coconut Expert, Mr. F. C. Cooke, while the third meeting was convened in connection with the visit of Dr. Paul Surany, an Entomologist of the South Pacific Commission. At the last meeting, which was held in December, His Excellency the Governor, Mr. J. K. R. Thorp, C.M.G. M.B.E., kindly accepted to attend and addressed the meeting.

His Excellency the Governor's interest in the Department and the agriculture of the Colony was further illustrated in the second of a series of 3 masterly talks, entitled "Looking Forward", which His Excellency broadcast on Radio Seychelles towards the end of the year. This talk, which was devoted to the Agricultural Development Schemes, was published in the Government Bulletin. With His Excellency's kind permission a French translation of it was also published in the local press.

Distinguished overseas visitors to the Department and the Botanical Gardens in 1958 included the Right Honourable the Under-Secretary of State for the Colonies, Mr. J. D. Profumo, O.B.E. M.P., his Secretary Mr. A. K. Robertson, Mr. J. H. Robertson, of the Colonial Office, the Director of the Colonial Audit, Sir John Worledge, C.M.G., K.B.E., Mr. F. C. Cooke, the Visiting Coconut Expert, Mr. J. W. F. Rowe, the Economic Adviser, Dr. P. Surany, an entomologist of the South Pacific Commission, Mr. Ian Flemming, the writer, Mr. H. Legrand, an eminent French lepidopterist, and Dr. Allen Kohn and Dr. Willard Hartman, of the Oceanographic Laboratory of the Yale University.

Finally, I wish to thank the depleted staff of the Department for their cheerfulness, diligence and devotion to duty and to the Director and myself during a year when shortage of technical officers was acute and the burden of work heavy.

GUY LIONNET,
Acting Director of Agriculture.

Department of Agriculture,
Seychelles,
20th March, 1959.
